

Claims

[c1] What is claimed is:

1. A method for protecting an optical pickup head from temperature variation comprising:
detecting a temperature of the optical pickup head when a spindle motor rotates at a first speed; and
controlling the spindle motor to rotate at a second speed if the temperature of the optical pickup is over a first predetermined temperature;
wherein the second speed is slower than the first speed.

[c2] 2. The method of claim 1 wherein the temperature of the optical pickup head is detected by a thermistor.

[c3] 3. The method of claim 1 wherein if the temperature of the optical pickup head increases to a rated operating temperature, the spindle motor is shut down.

[c4] 4. The method of claim 1 further comprising when the spindle motor rotates at the second speed, controlling the spindle motor to rotate at the first speed if the temperature of the optical pickup head is lower than a second predetermined temperature.

- [c5] 5. The method of claim 4 wherein the first predetermined temperature is higher than the second predetermined temperature.
- [c6] 6. A method for protecting an optical pickup head from temperature variation comprising:
detecting a temperature of the optical pickup head when a spindle motor of an optical disk drive rotates; and
reducing the speed of the spindle motor if the temperature of the optical pickup increases to a first predetermined temperature.
- [c7] 7. The method of claim 6 wherein the temperature of the optical pickup head is detected by a thermistor.
- [c8] 8. The method of claim 6 wherein if the temperature of the optical pickup head increases to a rated operating temperature, the spindle motor is shut down.
- [c9] 9. The method of claim 6 further comprising when the spindle motor rotates at low speed, increasing the speed of the spindle motor if the temperature of the optical pickup head is lower than a second predetermined temperature.
- [c10] 10. The method of claim 9 wherein the first predetermined temperature is higher than the second predetermined temperature.

- [c11] 11. A method for protecting an optical pickup head from temperature variation comprising:
detecting a temperature of the optical pickup head when a spindle motor of an optical disk drive rotates; and
reducing the speed of the spindle motor if the temperature of the optical pickup decreases to a first predetermined temperature.
- [c12] 12. The method of claim 11 wherein the temperature of the optical pickup head is detected by a thermistor.
- [c13] 13. The method of claim 11 wherein if the temperature of the optical pickup head decreases to a rated operating temperature, the spindle motor is shut down.
- [c14] 14. The method of claim 11 further comprising when the spindle motor rotates at low speed, increasing the speed of the spindle motor if the temperature of the optical pickup head is higher than a second predetermined temperature.
- [c15] 15. The method of claim 14 wherein the first predetermined temperature is lower than the second predetermined temperature.